



ILT2 motorized screens INTERFACE

Your screen is equipped with Somfy ILT2 motors which allows more presets than standard Somfy Motors (LT50 or LS40)

This screen needs to be controlled could be controlled using two controllers:

SOMFY® interface called “SOMFY® 4ILT interface” RS485 (+ converter RS232)



Following instructions concern the “SOMFY® 4ILT control box”.

The following interfaces can be used to connect up to 4 ILT2 Somfy motors on the 2-way or 4-way masked screens. There are different versions available. In the following table you can compare the various settings based on the version.

Version	Included parts	Set or change end limits motors		Set or change Preset ratio	
MCS-ILT-4 only interface			with MCS-ILT-T setting tool (not included)		with Computer or automation System (not included)
MCS-ILT-4-IR with infrared remote control			with IR remote control (included)		with IR remote control (included)
MCS-ILT-4-IP with TCP/IP control			with MCS-ILT-T setting tool (not included)		with Computer or automation System (not included)

CRESTRON® interface developed for ILT2 motors called “C2N-SSC-2” RS232



For the CRESTRON interface please refer to the specific CRESTRON documentation.

INTRODUCTION



This manual is an integral part of the product and must be read and understood in all its parts for safety reasons. It contains norms and directions for correct and safe use of the interface. The manual should never be separated from the product; it must be stored in a suitable place to ensure its integrity, and in such a way as to be easily consulted by authorised personnel. Product user shall be responsible for the manual's safekeeping. User shall also be responsible for checking the screen's functionality and for the repair or replacement of any damaged parts that could pose a hazard. Images contained in this manual are intended to provide a detailed description of the product's functions, characteristics and procedures. Any slight difference, depending on the model represented, will not change the meaning that the images convey.

GENERAL CHARACTERISTICS OF THE PRODUCT

The product are manufactured in compliance with the following EC directives: 2006-95-EC low voltage directive (LVD), 2004-108-EC electromagnetic compatibility (EMC), and the following reference standards mentioned in the European directives: EN 61058-1; EN 50366:2003 - EN 61000-6-1; EN 61000-6-3

The RS485 4ILT Interface is a motor controller for multi ratio motorized projection screens designed to be integrated into the projection screen cases.

It can control up to 4 SOMFY ILT motors. It can be interfaced with universal infra red remote controls, a RS485 data line or a videoprojector through a trigger.

Any other use shall be considered improper and is expressly forbidden. The manufacturer shall not be liable for damages resulting from improper use, or for any uses other than those set out in this manual.

GENERAL SAFETY NORMS



- Always read the instructions and warnings set out in this manual very carefully before using the product or before performing any maintenance interventions.
- Before and during use, check that the screen poses no risk of hazard.
- Do not tamper with, remove or damage any part or component of the product.
- Do not perform screen maintenance when the motor is on (for maximum safety, unplug the power cord).

All interface are covered by guarantee; validity of the same shall be subject to user's full compliance with the instructions contained in this manual.

WARNING: Faulty installation may compromise the safety of the product's operators; manufacturer shall not be held liable for damages to persons or things resulting from faulty installation, improper use, insufficient or inadequate maintenance of the screen.

Manufacturer shall not be held responsible for problems associated with installation errors.

Screen installation, electrical connections and verifications in case of malfunction of motorised rolling screens must be performed by authorised vendor or by personnel that is informed and trained in electrical hazards. The connection cable cannot be replaced. If the cable is damaged the screen must be replaced. Tampering with end stops or piercing the seal placed over holes shall entail the forfeiture of the guarantee. For any necessary clarifications please contact our technical office.

WARNINGS AND RECOMMENDATIONS FOR CORRECT USE

These interfaces are suitable for use in indoor ambiances in normal (0 / + 60 °C) temperature and humidity conditions. Special caution must be exercised when using the products out of doors, particularly with regard to temperature conditions and in the presence of dust.

ATTENTION: Do not allow children to play with fixed control devices. Keep remote controls out of the reach of children.

Monitor motors when in movement and keep people away from them until they stop.

TECHNICAL CHARACTERISTICS

- **Power supplier:** 90 ÷ 225 Vac 50/60 Hz
- **Protection class:** IP20 (of undamaged box)
- **Operating temperature:** 0 ÷ 60 °C
- **Dimension / weight:** 137 x 80 x 40 mm



Notes to the product's Technical Specifications:

With an universal IR remote control

- Please refer to the universal IR remote control instructions to learn the codes from a Somfy 8 channels remote control to the universal IR remote control.

- If there is no specific instructions, please contact your Screen Research local retailer.

With a trigger input

- The trigger input allows to synchronize the motorized projection screen with a videoprojector (For videoprojector with DC12V output).
- When the videoprojector will be powered ON, the interface will put the projection screen in Format 1 position.
- When the videoprojector will be powered OFF, the interface will put the projection screen in Format 8 position.

With a RS485 data line

The appendix (cf page 34) describes the SOMFY RS485 protocol, which is used to communicate with the RS485 4ILT Interface. The RS485 protocol supports bi-directional communication between a host and the interface.

The term «Host» refers to the device initiating communication with the interface, usually a computer-based system.

RS485 communication standard

All signals on the physical link between devices should comply with EIA/TIA-485-A standard.

Recommended cable : Shielded , two twisted- pair type 22 - 24 AWG (120 Ω)

Communication mode : half-duplex

Each character is coded as follow :

Character coding		
Baud Rate	4800	+/-1%
Start bit	Logical Level 0	
Data bits	8	Less significant bit transmitted first
Parity	Odd	
Stop bit	Logical Level 1	

DISPOSAL OF PRODUCT



As is the case for the installation of this device, its end-of-life disposal must be handled by qualified personnel.

This product is made up of various types of material: some can be recycled, others must be disposed of. Please enquire about recycling and disposal regulations in force in your territory for this type of product.

As indicated by the symbol on the left, dumping this product in domestic waste bins is forbidden. Please dispose of separately, according to regulations in force in your territory, or return the product to the dealer when you buy a new one.

Attention: under local regulations severe fines may apply in case of improper disposal of this product.

WARRANTY



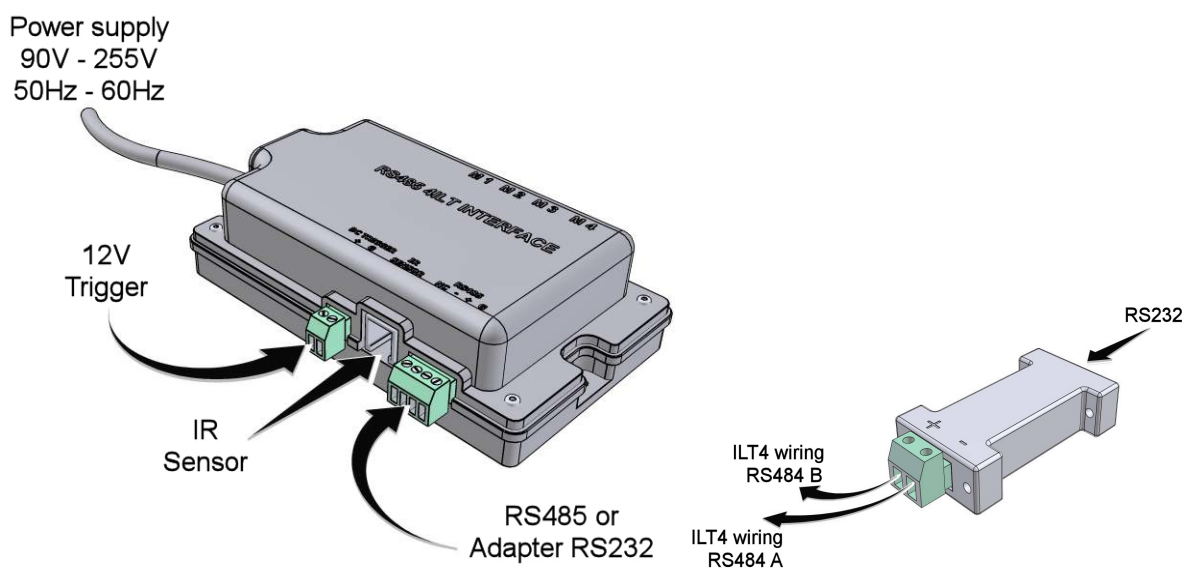
These control units are guaranteed for a 24-month period. Validity of the warranty shall commence on the date of purchase, which must be documented by the purchase document when requesting a repair service or replacement. The warranty covers any damages or malfunction resulting from the normal use of these products, and the free replacement of any components that should present manufacturing faults. The service includes collection and delivery, by a courier of the manufacturer's choice and at the manufacturer's expense (this applies only to warranties valid in Italy and Poland).

The warranty does not apply in case of improper use, installation, tampering or repair on the part of persons not authorised by the manufacturer. Components that present normal wear and tear as a result of their use or of particular weather or environmental conditions are not covered by this warranty. Products that are damaged during transportation or handling are not covered by this warranty. You are invited to check the goods very carefully when you receive them.

Products returned for repair without the manufacturer's return authorization (RMA) and without suitable packaging will not be accepted.

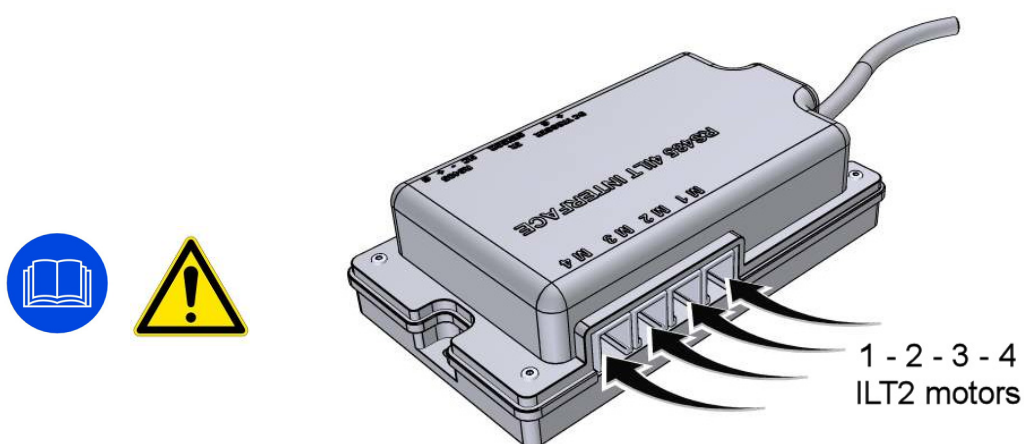
The manufacturer reserves the right to verify the existence of the requisites for the warranty's validity.

General connections



12V Trigger	IR Sensor	RS485	Adapter RS232
<p>$\pm = 5 \rightarrow 30V$ $G = \text{Ground}$</p>	<p>UP (red) PE (blue) +5 V DC (white) DOWN (yellow)</p> <p>red blue white yellow colour marking control line cable</p>	<p><i>NC = Not connected</i> <i>RS485 B</i> <i>RS485 A</i> <i>G = Ground</i></p>	<p><i>RS485 A = - RS232</i> <i>RS485 B = + RS232</i></p> <p><i>Transmission distance: 1000 meters/3281 feet</i></p>

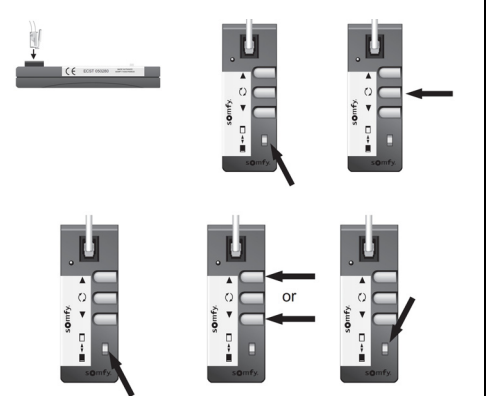
ILT2 motors connections



SCREEN	ILT plug M1	ILT plug M2	ILT plug M3	ILT plug M4
Fixed 4 Way	Left Mask	Right Mask	Top Mask	Bottom Mask
Fixed 2 Way lateral	Left Mask	Right Mask	Not connected	Not connected
Fixed 2 Way Top-Bottom	Not connected	Not connected	Top Mask	Bottom Mask
Rolling 4 Way	Projection Fabric	Top Mask	Left-Right Mask	Not connected
Rolling Top-Bottom	Projection Fabric	Top Mask	Not connected	Not connected

End limits motors setting with MCS-ILT-T setting tool

1. Connect the setting tool to the motor with the phone cable. The LED light turns on.
 2. Push the selector switch into the up position.
 3. Press the UP or DOWN button of the setting tool. Check if the UP push button controls the UP direction and the DOWN one the DOWN motion. If not, reverse the rotation direction simply by pushing the STOP push button (1 sec).
 4. Adjust the screen to the required position up limit by pressing the UP or DOWN buttons.
 5. Push the switch to its MIDDLE position. The UP limit recorded..
 6. For the DOWN limit, slide the to the DOWN position.
 7. Adjust the screen to the required DOWN limit, by pressing the UP or DOWN buttons.
 8. Do not press the STOP button once the DOWN limit is reached. Just let go and the screen will stop.
- *NOTE: If you do this then the motor will reverse directions and will not function when you set the switch to the MIDDLE position to record the DOWN limit. NEW LIMITS WILL NEED TO BE RECORDED AGAIN.
9. Push the selector switch to its MIDDLE position to record the DOWN limit.
 10. Check the UP & DOWN limits just set.



End limits motors setting with IR transmitter

MOTOR SELECTION LOGIC:

-Use the 1→8 or 5→8 button to select one of the motors. The selected motor will acknowledge by doing a small jog.

- 1) The 1→8 button to select the previous motor.
- 2) The 5→8 button to select the next motor.
- 3) The 1→4 button to select all the motors connected to the interface.

Once a motor is selected, you can control it individually.
After 2 min without any operation, all motors will react again to any operation.

MOTOR END LIMITS SETTING

1 - Adjust UP end limit:

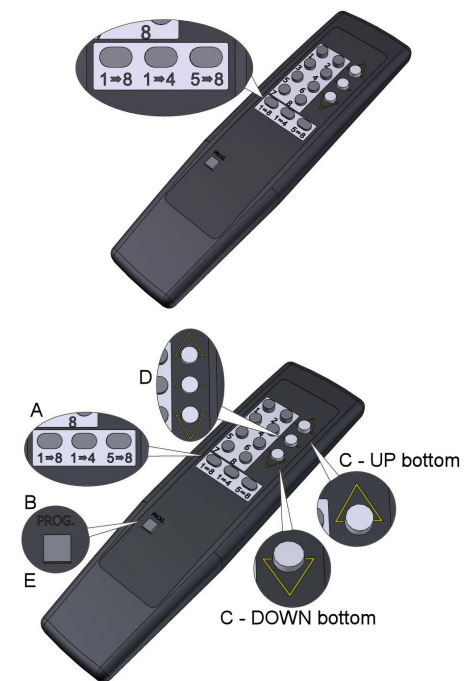
- A) Select the motor
 - B) To enter in setting mode, press the "Prog" button of the remote control until the screen jogs.
 - C) Press the UP button until the motor jogs.
 - D) Then with the UP or DOWN buttons, move the screen to the desired up limit.
- Note: If the direction of rotation is not correct, press the STOP button until the screen jogs.
- E) Press the Prog button to confirm the limit until the motor jogs.

2 - Adjust DOWN end limit:

- A) Select the motor
 - B) To enter in setting mode, press the "Prog" button of the remote control until the screen jogs.
 - C) Press the DOWN button until the motor jogs.
 - D) Then with the UP or DOWN buttons, move the screen to the desired up limit.
- E) Press the Prog button to confirm the limit until the motor jogs.

3 - Readjusting the end limit(s)

Please refer to: UP and DOWN end limits setting (1 and 2 point)



Format setting with IR transmitter

SETTING LOGIC:

- Buttons 1 to 8 will be used to set 1 to 8 formats.
- By default, buttons 1 to 7 are not set, button 8 stands for the user Home Position (all the screens retracted).

FORMAT SETTING:

- A) With the "selection motor buttons" and "Up - Down buttons" to move each motor (mask or projection fabric) to the desired position/format.
- B) then press the selected button (eg : button1) until all the screens jog.

-TIPS: During the adjustment of the screen, if you press and hold the UP or DOWN button, the screen moves step by step. You can use this function for a better adjustment of the screen.

CALL A FORMAT:

To call a format, press on the desired format button.

READJUSTING A FORMAT:

Please refer to : FORMAT SETTING

DELETE A FORMAT:

- A) Press the format button corresponding to the format to delete. The screens go to the memorized position.
- B) Press the corresponding format button until all the screens jog. The format is deleted.



SOFTWARE PROVIDED

To control the screens with ILT4 and control serial (RS232 or RS485) are available the following software: EventGhost_0.3.7.r1170
 (Software: http://www.eventghost.org/downloads/EventGhost_0.3.7.r1462_Setup.exe)
 (Download package: http://www.screenresearch.com/website/documents/software_current/ILT%20Interface.rar)

Description:

EventGhost Software is an advanced, easy to use and extensible automation tool for MS Windows. It can use different input/output devices to trigger macros (Such as serial COM port of your Computer), that on their part control a computer and its attached hardware. These remote controls has been developed to set and control easily the motors of your X-Mask using your Computer. It is a tool for Installer usage ONLY to make on-site installation by RS485 Commands easier.

Events and action previously sent by
Eventghost Software

Macro builder and launcher

Configuration

- Configuration Tree
- Autostart
- Plugin: Serial Port
- Plugin: Desktop Remote
- Remote control
- XMask 4way Masking Remote Control
- XMask 2way Masking Remote Control
- Commands

COM port parameter

Macro for 4way masking or 2 way masking screens (select and hit F5 on your keyboard or to enable the remote control)

XMask 4way Masking Remote Control

XMask 2way Masking Remote Control

FILE PROVIDED

Remote control XMask 2.xml



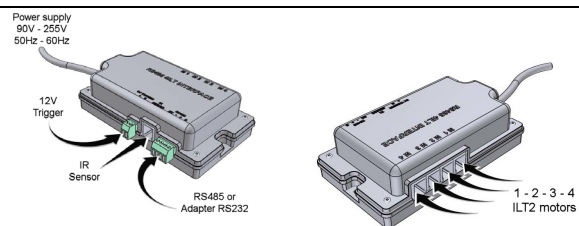
THIS SOFTWARE WORKS ONLY WITH SOMFY 4ILT INTERFACE



INSTALLATION

SCREEN and INTERFACE:

- A) Connect each motor to the power supply
- B) Connect the ILT interface to the power supply and wait initialization time of 15 seconds
- C) Plug RJ9 from each motors into the ILT Interface
- D) Plug your RS485 cable between your computer and the ILT interface as shown in the documentation provided



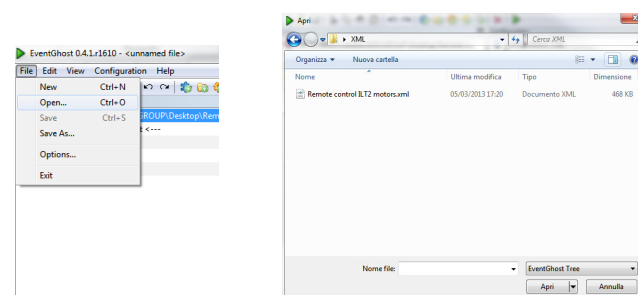
SOFTWARE:

A) Install and Launch EventGhost Software

B) Load/Open file "Remote control XMask 2.xml":

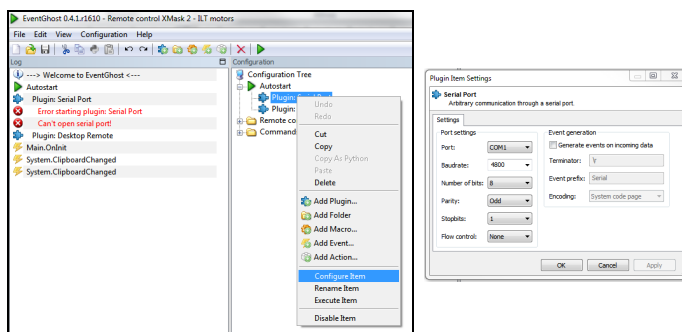
- 1 - select the "file - open..." in the toolbar
- 2 - search the "xml file" in your PC
- 3 - select the "open" in the windows

EventGhost_0.3.7.r1170_Setup.exe



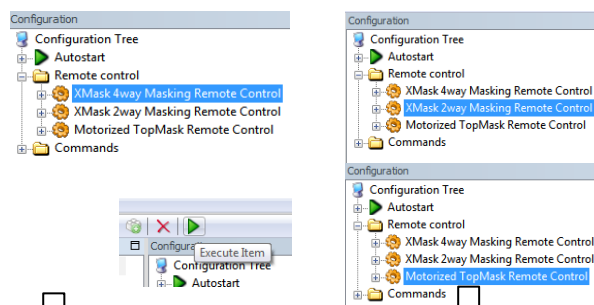
C) Set the COM Port parameters:

- 1 - select the "Plugin: Serial Port" - open..." in the toolbar
- 2 - open menu with right button and select "Configure Item"
- 3 - check the parameter: - 4800 bauds,
 - 8 bits,
 - Parity Odd,
 - 1 stopbits,
 - None flow control.
- 4 - confirm with "OK"

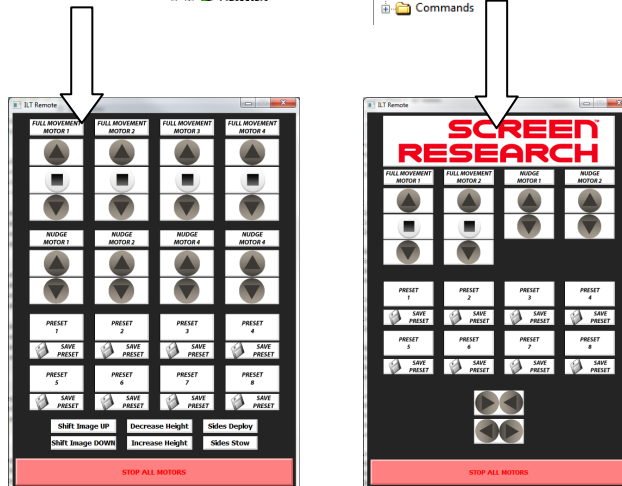


D) Open the remote control

- 1 - select the macro (not double-click)
 - If your Screen is a 4 way masking : select the "XMask 4way Masking Remote Control"
 - If your screen is a 2 way masking : select the "XMask 2way Masking Remote Control"
 - If your screen is a Motorized Topmasking : select the "Motorized TopMask Remote Control"
- 2 - select the "Executive Item" in the toolbar



E) The remote control appears on your desktop.



DATA PARAMETER SERIAL

Commands	Code ASCII	Code Hexadécimal
Select format 1	7FF3FBFFFFFF000000FE0668	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFE\x06\x68
Select format 2	7FF3FBFFFFFF000000FD0667	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFD\x06\x67
Select format 3	7FF3FBFFFFFF000000FC0666	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFC\x06\x66
Select format 4	7FF3FBFFFFFF000000FB0665	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFB\x06\x65
Select format 5	7FF3FBFFFFFF000000FA0664	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFA\x06\x64
Select format 6	7FF3FBFFFFFF000000F90663	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF9\x06\x63
Select format 7	7FF3FBFFFFFF000000F80662	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF8\x06\x62
Select format 8	7FF3FBFFFFFF000000F70661	\x7F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF7\x06\x61
Save format 1	6FF3FBFFFFFF000000FE0658	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFE\x06\x58
Save format 2	6FF3FBFFFFFF000000FD0657	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFD\x06\x57
Save format 3	6FF3FBFFFFFF000000FC0656	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFC\x06\x56
Save format 4	6FF3FBFFFFFF000000FB0655	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFB\x06\x55
Save format 5	6FF3FBFFFFFF000000FA0654	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFA\x06\x54
Save format 6	6FF3FBFFFFFF000000F90653	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF9\x06\x53
Save format 7	6FF3FBFFFFFF000000F80652	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF8\x06\x52
Save format 8	6FF3FBFFFFFF000000F70651	\x6F\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF7\x06\x51
Reset format 1	6EF3FBFFFFFF000000FE0657	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFE\x06\x57
Reset format 2	6EF3FBFFFFFF000000FD0656	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFD\x06\x56
Reset format 3	6EF3FBFFFFFF000000FC0655	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFC\x06\x55
Reset format 4	6EF3FBFFFFFF000000FB0654	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFB\x06\x54
Reset format 5	6EF3FBFFFFFF000000FA0653	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFA\x06\x53
Reset format 6	6EF3FBFFFFFF000000F90652	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF9\x06\x52
Reset format 7	6EF3FBFFFFFF000000F80651	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF8\x06\x51
Reset format 8	6EF3FBFFFFFF000000F70650	\x6E\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xF7\x06\x50
Move up all motors	67F2FBFFFFFF000000FFE074E	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFF\xFE\x07\x4E
Move up motor 1	67F2FBFFFFFF000000FEFE074D	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFE\xFE\x07\x4D
Move up motor 2	67F2FBFFFFFF000000FDFE074C	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFD\xFE\x07\x4C
Move up motor 3	67F2FBFFFFFF000000FCFE074B	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFC\xFE\x07\x4B
Move up motor 4	67F2FBFFFFFF000000FBFE074A	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFB\xFE\x07\x4A
Move down all motors	67F2FBFFFFFF000000FFFD074D	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFF\xFD\x07\x4D
Move down motor 1	67F2FBFFFFFF000000FEFD074C	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFE\xFD\x07\x4C
Move down motor 2	67F2FBFFFFFF000000FDFD074B	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFD\xFD\x07\x4B
Move down motor 3	67F2FBFFFFFF000000FCFD074A	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFC\xFD\x07\x4A
Move down motor 4	67F2FBFFFFFF000000FBFD0749	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFB\xFD\x07\x49
Move stop all motors	67F2FBFFFFFF000000FFFC074C	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFF\xFC\x07\x4C
Move stop motor 1	67F2FBFFFFFF000000FEFC074B	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFE\xFC\x07\x4B
Move stop motor 2	67F2FBFFFFFF000000FDFC074A	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFD\xFC\x07\x4A
Move stop motor 3	67F2FBFFFFFF000000FCFC0749	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFC\xFC\x07\x49
Move stop motor 4	67F2FBFFFFFF000000FBFC0748	\x67\xF2\xFB\xFF\xFF\xFF\x00\x00\x00\xFB\xFC\x07\x48
Get Screen Status all	77F3FBFFFFFF000000FF0661	\x77\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFF\x06\x61
Get status motor 1	77F3FBFFFFFF000000FE0660	\x77\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFE\x06\x60
Get status motor 2	77F3FBFFFFFF000000FD065F	\x77\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFD\x06\x5F
Get status motor 3	77F3FBFFFFFF000000FC065E	\x77\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFC\x06\x5E
Get status motor 4	77F3FBFFFFFF000000FB065D	\x77\xF3\xFB\xFF\xFF\xFF\x00\x00\x00\xFB\x06\x5D

SOMFY INFRARED CODE

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Alternate Pattern	"UP"	0000 006b 0000 0017 0015 012 0015 0012 0012 0014 0013 0014 0013 0014 0013 0014 0012 0015 0012 0014 0013 0014 0013 0014 0012 0014 02a4 0007 011d 0006 011d 0007 011e 0006 00be 0006 011e 0007 00be 0007 00be 0006 00bd 00bd 0007 00be 0006 0006 011c 0007 03d1
		0000 006b 0000 0017 0015 012 0012 0014 0013 0014 0013 0014 0013 0014 0012 0014 0013 0014 0012 0015 0012 0014 0013 0014 02a3 0007 011d 0007 00bd 0006 011f 0006 00bc 0007 011f 0006 00bd 00bd 00bd 0006 00bd 00bd 0007 00be 0006 00bd 0006 011e 0006 03d0
		0000 006b 0000 0017 0015 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 02a7 0007 011f 0006 0120 0006 011f 0007 00be 0006 0121 0006 00be 0008 00be 0006 00bf 0006 0007 00bf 0006 011f 0006 03d6
		0000 006b 0000 0017 0015 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 0013 0014 02a7 0007 011f 0006 00bf 0006 0120 0006 00bf 0006 0120 0006 00be 0007 00bf 0006 00be 0007 00bd 0008 0008 011e 0007 03d5

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